

# Open Versus Closed Haemorrhoidectomy – An Experience at Mayo Hospital

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Hemorrhoids are a common problem that affects a larger group of population. It affects both sexes and is more common in the more prosperous societies, perhaps related to exercise, diet and bowel habits. The objective of the study was to compare the outcome of the two conventional methods of haemorrhoidectomy, open and closed techniques for 3rd degree prolapsing and complicated haemorrhoids. This would be a non-interventional type of study comparing the two methods conducted at surgical unit-I Mayo Hospital, Lahore comprising of fifty patients selected randomly and equally divided in two groups. No statistically significant differences were found between the two methods regarding complications and postoperative hospital stay ( $P>0.05$ ). Pain and the analgesic requirement on the day of surgery and the first postoperative day was significantly lower ( $P<0.05$ ) in open haemorrhoidectomy group. Complete wound healing took longer in open haemorrhoidectomy as compared to closed technique, 3 patients suffered wound dehiscence after closed haemorrhoidectomy. Only 4% in each group develop recurrence after one year. Open haemorrhoidectomy leads to more reliable wound healing with lesser complications, though healing time is more as compared to the closed technique. Both techniques are fairly efficient for treating third degree haemorrhoids

**Key words:** Haemorrhoidectomy, comparison, stenosis

Haemorrhoids are amongst the commonest ailments of the anorectal region suffered by the general population. John of Arderne, the first English surgeon said in the whereabouts of 13701; region suffered by the general population. At one time or another about 40% of the western population suffer from this condition<sup>3</sup>. No age group is immune and they have been reported even in the very young<sup>3</sup>. The causes of hemorrhoidal disease are unknown, constipation, abnormal bowel habit, prolong standing, increased abdominal pressure, all combine to increase likelihood that hemorrhoidal tissue will develop<sup>6,7,8</sup>. The prevalence of this disease in general population has led to the evolution of various surgical and non-surgical techniques. Among the various techniques employed are haemorrhoidectomy, rubber band ligation, lord's procedure, cryosurgery, sclerotherapy and laser technique I. In patients who have associated condition like anal fissures, skin tag, external haemorrhoids etc., must be treated before dealing with haemorrhoids. If haemorrhoids are complicated such as thrombosed, haemorrhoidectomy is indicated<sup>3</sup>. Similarly if outpatient procedures fail to achieve required results then haemorrhoidectomy is indicated. Haemorrhoidectomy is the conventional treatment of 3rd degree, prolapsing and complicated haemorrhoids and in its various forms the surgeons have employed it for ages. In our country, the sufferers belong to all socioeconomic classes. Generally, people with more sedentary habits like bankers; accountants, shopkeepers suffer more from this disease<sup>1</sup>. In the general public haemorrhoidectomy has a bad reputation of being very painful unpleasant and uncomfortable. Severe post operative pain, urinary retention, reactionary and secondary haemorrhage, stricture, stenosis and anal

incontinence are common sequelae. To reduce these complications, various modifications were done in the standard operative techniques. In the recent past there has been a strong trend in favour of day case stapled haemorrhoidectomy.

Treatment of haemorrhoids is as old as mankind itself. For centuries surgeons have been treating this condition. Surgical treatment of haemorrhoids has been practiced from earlier times. The modification done by Miles in 1919 and other by Milligan-Morgan gained favour and now ligation excision is the most widely employed procedure. Closed hemorrhoidectomy was popularized by Ferguson et al; in 1971, aim was to prevent stenosis that he thought resulted from large raw wounds<sup>35</sup>. Whitehead introduced his total circular haemorrhoidectomy in 1982 and claimed excellent results. It was received enthusiastically but later on was criticized justifiably because of anal stricture, and incontinence and mucous ectropion<sup>17</sup>.

In recent past stapled haemorrhoidectomy was introduced revealing better results. Much work has been done in West comparing different methods of haemorrhoidectomy. Ho, Y-H and Seow-Choen in 1997 did a randomized controlled trial of open and closed haemorrhoidectomy.

## **Purpose of study:**

The objective of this study was to compare the two conventional methods of Haemorrhoidectomy, open and closed techniques for 3rd degree, prolapsing and complicated haemorrhoids.. The following parameters were studied;

1. Hospital stay



2. Infection rate
3. Haemorrhage
4. Disruption of suture line in closed technique
5. Complications such as abscess, fistulae, anal fissure, stenosis and recurrence.

#### Materials and methods:

This study was carried out in the surgical unit-I of Mayo Hospital, Lahore over a period of 20 months i.e., from August 2000 to March 2002 involving fifty patients having third degree haemorrhoids including 19 females and 31 males. Forty patients were admitted through outpatient department, 8 patients through emergency and two were referred by physicians. In the males the age incidence varied from 21 to 70 years whereas in the females it was from 31 to 65 years. All the cases were interviewed, examined, investigated and entered on the proforma prepared for this purpose. The patients were selected at random. Equal number of patients were allocated to each of the two treatment modalities compared with each other. The consultants of the unit performed the procedures. The patients were followed up in outpatients and indoor department of surgical unit. After receiving the patients, they were managed as follows: A detailed history was taken and a thorough physical examination was done. This included age, sex, occupation, eating habits symptoms and their duration. Any history of previous treatment modes used. Patients having any associated condition like perianal diseases and carcinoma rectum or colon, were excluded from the study. Local and digital per-rectal examination was carried out in every patient. All patients also underwent proctoscopic and sigmoidoscopic examinations. Number and position of haemorrhoids were recorded. Radiological and colonoscopic examination was also carried out if the patients had additional warning symptoms as change in bowel habit. Blood was transfused to the patients who were found anemic. All the patients were given clean water enemas before carrying out the procedure, at pre-operative night and the other early in the morning on the operation day. All the patients having haemorrhoidectomy were given pre and peroperative antibiotic cover by First generation cephalosporins and metronidazole. All the patients undergoing haemorrhoidectomy received general anaesthesia with endotracheal intubation. The postoperative course of every patient was recorded. Any complication was recorded and managed accordingly. The patients having haemorrhoidectomy were advised to have sitz bath and local analgesic application and stool softener on and after the first postoperative day. The duration of stay of each patient was recorded. Patients were kept in the hospital postoperative for 24-36hrs. on an average. At the time of discharge patients were advised for modification in dietary habits. The patients were followed up after one week, one month, three months and 1 year periods after receiving initial treatment. The patients were asked about their

opinion regarding the treatment they received and was recorded as such.

#### Result:

A total of 50 patients were included in this study. patients (62%) were male and female patients were 19 (38%). In the males the highest number of patients were in age group 41-60 whereas in females it was 31-50. entails that out of a total of 50 patients in the study 37 patients had grade III primary haemorrhoids at the time of presentation and 13 patients presented with complicated haemorrhoids. Regarding postoperative pain, 2 patients (8%) who had closed haemorrhoidectomy complained of severe pain. No patient reported severe pain in open haemorrhoidectomy group. Moderate pain was reported by 8 patients (32%) having closed haemorrhoidectomy and 03 patients (12%) who had open haemorrhoidectomy. Eight patients (32%) of open haemorrhoidectomy group and twelve patients (48%) of closed haemorrhoidectomy group had mild pain. There was no pain reported by 3 (12%) of closed technique group and 14 (56%) of open haemorrhoidectomy group, ( $P < 0.05$ ). So, postoperative pain and analgesia requirement observed in early postoperative period after open technique was significantly low. The complications observed in the follow-up of the patients underwent the two varieties of haemorrhoidectomy, in no patient hemorrhage occurred, wound infection observed in ten cases (40%) with open haemorrhoidectomy and eight cases (32%) with closed haemorrhoidectomy with no statistically significant difference ( $P > 0.05$ ). Wound disruption found in 3 patients (12%) after closed haemorrhoidectomy. None of the patients had developed anal stenosis and fistula-in-ano after open haemorrhoidectomy. One patient having open procedure developed anal fissure. In patients having closed type of haemorrhoidectomy incidence of anal fissure was two cases (8%), of fistula-in-ano was only one case (4%) and no patient developed anal stenosis. Average stay at hospital for each group of patient, which was found almost equal in both varieties of haemorrhoidectomy i.e., 24-36 hrs showing no statistically significant value ( $P > 0.05$ ).

#### Discussion:

The study on comparison of open and closed methods of haemorrhoidectomy was carried out in surgical unit-I of Mayo Hospital, Lahore over a period of 20 months. This study included 50 patients suffering from third degree haemorrhoids selected at random basis. Out of these 50 patients 38% were females ranging in age from 31-70 years. Highest number of patients was in the age group 41-50. The male patients were 62% of the total. The variation in age was from 24 -70 years. Highest number of patients was in age group 41-50.

In the Western culture the incidence of haemorrhoids is very high according to McLatchie it was 40%. In a study on elderly population Balasuriya and Nagegoda presented an incidence of 10.1% of patients with



haemorrhoids<sup>58</sup>. In our country haemorrhoids are one of the most common complaint of patients presenting in the surgical outdoors<sup>47,49</sup>. Burkitt (1972)<sup>29</sup> claimed that varicose veins and haemorrhoids were rather commoner in women than men. In our study the number of men was more than women.

These two varieties of hemorrhoidectomy had been compared in many other clinical trials in the past. In a study comparing the open and close hemorrhoidectomy. Seow-Cheon(1997)<sup>38</sup> concluded that open hemorrhoidectomy leads to faster and more reliable wound healing although this did not result in less pain or fewer complication.

Arbman (2000)<sup>45</sup> presented a comparative study of open and close hemorrhoidectomy. He concluded that both methods are fairly efficient treatment for haemorrhoids without serious drawbacks. The closed method has no advantage in postoperative pain reduction but wound heals faster and the risk of wound dehiscence seen exaggerated. Sielezneck(1997)<sup>37</sup> in his study declared short term postoperative morbidity is generally low after Milligan- Morgan Haemorrhoidectomy with careful supervision in a surgical department. Gencosmangolu (2002)<sup>59</sup> concluded in his study that although healing time is longer, the open technique is more advantageous with respect to shorter operation time, less discomfort in early postoperative period and low morbidity rate. Khubchandani IT(1997)<sup>57</sup>declared in his study the open variety is more comfortable to patient as less painful, recurrence rate is lesser though healing time is shorter in close variety.

In patients who have associated conditions like anal fissures, skin tags, external haemorrhoids etc., underlying condition must be treated before dealing with haemorrhoids. If haemorrhoids are complicated such as thrombosed haemorrhoidectomy is indicated<sup>49</sup>. Similarly if outpatient procedures fail to achieve required results then haemorrhoidectomy is indicated.

In this study it was seen that 48% of the patients had not received any treatment before 34% of the patients had been put on conservative management 14% had injection sclerotherapy whereas 4%of the patients previous history of haemorrhoidectomy. The intensity of postoperative pain/discomfort was evaluated because it is one of the most important factor in comparing the two varieties. In this study 8% of the patients who had closed haemorrhoidectomy suffered severe pain. No patient with open haemorrhoidectomy had severe pain. The incidence of patients having no pain after treatment was 56% after open haemorrhoidectomy and 12% after close haemorrhoidectomy. So, lesser number of patients experienced pain and discomfort early postoperative period in cases of open haemorrhoidectomy in this study. The average postoperative hospital stay in both type of procedure was 24-36 hr. Recurrence rate remained very small for both the procedures. Other complications

encountered in patient's follow-up are wound infection, anal fissure in both groups and disruption of suture line occurred in three patients in between 5-7 days postoperatively. Only one patient having closed haemorrhoidectomy developed Fistula in ano, following an abscess, after 1 & ½ month of the initial procedure.

Diagnosis is the most important aspect of management of haemorrhoids. The patients should be properly assessed before embarking upon any kind of treatment. A proper and detailed history should be elicited. All patient should be thoroughly examined. Proctoscopic and sigmoidoscopic examinations should be performed in each and every case. It should be ascertained that the haemorrhoids are primary or secondary. If haemorrhoids are secondary original cause should be ruled out by proper examination and necessary investigation such as abdominal ultrasound and contrast radiographic studies carried out associated condition such as skin tags, fissures, fistulas, external haemorrhoids should be looked for and these cases advised surgery as first choice treatment<sup>54</sup>.

Early identification of patients with haemorrhoids and education of general public is an integral part of management to decrease morbidity and loss of work hours caused by it. The important aspects of management of a patient with haemorrhoids are:

1. Detailed history and thorough physical examination and investigations to rule out whether haemorrhoids are primary or secondary.
2. If haemorrhoids are secondary the management should aim at identifying the underlying cause and treating it first.
3. Patients with forth degree haemorrhoids, complicated haemorrhoids or haemorrhoids with associated conditions should be advised haemorrhoidectomy as first choice treatment.

#### Conclusion:

Open haemorrhoidectomy leads to more reliable wound healing with lesser complications, though complete wound healing time is more as compared to the closed technique. Both techniques are fairly efficient in treating third degree haemorrhoids.

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